

September 12th.

The President, DR. BRIDGES, in the Chair.

Eighteen members present.

The deaths of Mr. Jacob R. Smith and Mr. Joseph D. Brown, members of the Academy, were announced.

September 19th.

The President, DR. BRIDGES, in the Chair.

Twenty members present.

The following papers were offered for publication :

"On a new generic type of Sharks," and "On two species of Delphinidæ." By Prof. Theo. Gill.

"Notes on a species of Hunchback Whale." By Prof. E. D. Cope.

Dr. Leidy directed the attention of the Academy to some fossil remains of Rhinoceros from Texas and California, which, he observed, together with those already described by him from the Mauvaises Terres of White River, and from the Niobrara or L'eau-qui-court River, of Nebraska, were probable evidence of the former existence of five species of the genus within the boundaries of the United States.

One of the species, previously described, from White River, is so peculiar as to constitute a subgenus apart from the others. It was a small animal, with a hornless skull, and possessed six incisors and a pair of canines in each jaw, besides the usual series of seven molars on each side. It was named *Hyracodon nebraskensis* (Proc. Acad. Nat. Sci. 1856, 92.)

The second species, *Rhinoceros occidentalis*, from White River, has the same formula of dentition as the Indian or Javan Rhinoceros, and was about half the size of that animal.

Rhinoceros crassus, (Pr. Ac. 1858, 28), from L'eau-qui-court, has the same formula of dentition as the Indian Rhinoceros, and was about the same size. The incisors appear to have held the same proportionate size as in the latter, but in *R. occidentalis* they were proportionately very much smaller. A worn superior incisor of *R. crassus* measures 28 lines antero-posteriorly and 10 lines transversely. The corresponding tooth of *R. occidentalis* measures 11 lines by 5 lines. A broken superior last molar of the former is estimated to have measured 28 lines obliquely and externally, the same diameter transversely and anteriorly, and 24 lines antero-posteriorly and internally. In *R. occidentalis* corresponding measurements hold the relationship of 18 lines, 18 lines, and 16 lines.

The Texan Rhinoceros is indicated by the greater and more characteristic portion of the crown of an upper molar tooth, probably the penultimate. It was obtained from a tertiary deposit, probably miocene, and submitted to Dr. L. for examination, by Dr. Benj. F. Shumard. It presents much the general appearance of preservation of the Mauvaises Terres fossils of White River. It evidently indicates a species different from those of the latter locality, and was larger than either, approaching in size *R. crassus*, though it was smaller. The estimated measurements of the restored tooth are two inches for the antero-posterior diameter externally, 22 lines for the transverse diameter anteriorly, and 18 lines in the latter direction posteriorly. The median valley is strongly sigmoid, arising from each of the inner lobes being provided with an oblique offset extending into the valley in a parallel manner. For the species the name of *Rhinoceros meridianus* was proposed.

The California Rhinoceros is indicated by the greater portion of the right

[Sept.

side of a lower jaw retaining the symphysis; from Chili Gulch, Calaveras Co., and was submitted to Dr. L.'s inspection by Prof. J. D. Whitney, who is in charge of the California State Survey. The specimen resembles, in its condition of preservation, the Mauvaises Terres fossils of White River, Nebraska. The formula of dentition is the same as in the Indian Rhinoceros, and the proportionate size of the teeth was the same. It was about the size of *R. occidentalis*, or perhaps a trifling degree larger, but its lateral incisors were triple the size. The estimated length of the jaw is about 16 inches. The space occupied by the molar series is 8 inches. Regarding the specimen as indicating a species distinct from any of the preceding, the name of *Rhinoceros hesperius* was proposed for it.

September 26th.

The President, Dr. BRIDGES, in the Chair.

Thirty-two members present.

On report of the respective Committees, the following papers were ordered to be published:

On a New Generic Type of SHARKS.

BY THEODORE GILL.

In the year 1858 the Smithsonian Institution received, from Capt. Stone, the jaws and vertebrae of an enormous species of shark existing in the Gulf of California and known to the inhabitants of the neighboring regions as the "Tiburón ballenas," or "whale shark." The specimen represented by the spoils was said to have been "twenty feet long," with a "head six feet wide," "pectorals three feet long" and "flukes six feet between tips." "The back from the head to first dorsal fin, brown with reddish spots." The head is represented as truncated in front.

The dried dentigerous band of the upper jaw is slightly curved forwards, about nineteen inches between the extremities, and somewhat more than an inch in width in front. The teeth are fixed and extremely minute, the largest being little more than a line in length, and decrease towards the ends of the jaw; they are disposed in regularly transverse rows, of which there are over one hundred and sixty (164—167) on each side, while in front there are from thirteen to sixteen in each transverse row; each tooth is recurved backwards and acutely pointed, swollen and with a heel-like projection in front rising from its base.

This type will be seen, therefore, to be very distinct, but is evidently related to the South African genus *Rhinodon*, and must be referred to the family of Rhinodontidae with the name of *Micristodus punctatus*.

On two species of DELPHINIDÆ, from California, in the Smithsonian Institution.

BY THEODORE GILL.

While examining the species of Cetaceans, represented by skulls and skins, in the Smithsonian Institution, I discovered two species of Delphinidæ supposed to have been hitherto undescribed. Brief descriptions of these are now submitted; at another time, it is proposed to give more extended descriptions as well as figures.

LAGENORHYNCHUS OBLIQUIDENS, Gill.

The skull in its generic characters agrees with that of *L. leucopleurus*, the 1865.]